Patent Claims

Sub A1

1. A voltage intermediate circuit converter having a 12-pulse input converter (2) which has two converter elements (4, 6), having a voltage intermediate circuit (12) which has two capacitors (8, 10) which are connected electrically in series, and having a machine-side three-point pulse-controlled converter (14), with the two converter elements (4, 6) of the input converter (12) being electrically conductively connected on the DC-side to a respective capacitor (8, 10) in the voltage intermediate circuit (12), characterized
in that the converter elements (4, 6) of the input converter (12) have a respective self-commutated pulse-controlled converter (4_1, 6_1).

2. The voltage intermediate circuit converter as claimed in claim 1,
characterized
in that the self-commutated pulse-controlled converters (4_1, 6_1) are each three-point pulse-controlled converters.

3. The voltage intermediate circuit converter as claimed in claims 1 and 2,
characterized
in that each capacitor (8, 10) in the voltage intermediate circuit (12) is split such that one capacitor (8_1, 10_1) is associated with the machine-side three-point pulse-controlled converter (14), and two capacitors (8_2, 8_3; 10_2, 10_3) are associated with a pulse-controlled converter (4_1, 6_1) in the input converter (12).

4. The voltage intermediate circuit converter as claimed in one of the abovementioned claims.

characterized

in that the number of series-connected active converter devices (T1, T2, T3, T4) in the self-commutated pulse-controlled converters (4_1, 6_1) in the input converter (12) is equal to the number of series-connected active converter devices (T1, T2, T3, T4) in the machine-side three-point pulse-controlled converter (14).

5. The voltage intermediate circuit converter as claimed in one of claims 1 to 3,
characterized
in that the number of series-connected active converter devices (T1, T2, T3, T4) in the self-commutated pulse-controlled converters (4_1, 6_1) in the input converter (12) is one less than the number of series-connected active converter devices (T1, T2, T3, T4) in the machine-side three-point pulse-controlled converter (14).

6. The voltage intermediate circuit converter as claimed in one of the abovementioned claims,
characterized
in that high-voltage insulated gate bipolar transistors are provided as active converter devices (T1, T2, T2, T4) of the self-commutated pulse-controlled converters (4_1, 6_1) in the input converter (12) and in the machine-side three-point pulse-controlled converter (14).